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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/009,817

12/13/2001

Ilan Levy

01/22952

6282

7590

03/06/2006

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EXAMINER

MAIER, LEIGH C

ART UNIT

PAPER NUMBER

1623

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,817

Applicant(s)

LEVY ET AL.

Examiner

Leigh C. Maier

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-105 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 13-104 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/28/03, 7/1/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restriction

Applicant's election without traverse of Group I, claims 1-49 and 105 in the reply filed on July 14, 2004 is acknowledged. For the required election of species, Applicant has elected a polysaccharide-binding domain having another protein covalently coupled thereto and indicated that claims 1-10, 12 and 105 read on this species. Claims ^{11 and 13-104} ~~11-104~~ are withdrawn from further ^{LCM} consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions and currently non-elected species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10, 12 and 105 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a "process of manufacturing a polysaccharide containing material having at least one *desired* structural, chemical, physical, electrical and/or mechanical property ..."
(emphasis added) However, there is no description of what these "desired" properties might be. Therefore, it would appear that the outcome of the process depends on what happens to be in the mind of the artisan approaching the process. Because of this, one of ordinary skill would not be apprised of the metes and bounds of the claims.

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The claim further recites treating the polysaccharide structures “before, during and/or after processing said polysaccharide structures into the polysaccharide containing material.” Therefore the independent claim covers any time during the “lifetime” of the polysaccharide structure and polysaccharide-containing material. However, claims 2, 3 and 4 are limited to “before,” “during” and “after,” respectively, but there does not appear to be any particular distinction in these time periods. For example, take the processing of cellulose into paper: Cellulose exists in a tree and eventually ends up as a substance recognizable as paper. There are a number of steps between cutting down the tree and ending up with paper. It is not clear at what point in this process “before” becomes “during.” Furthermore, it appears that the distinction between “during” and “after” would depend on the desired ultimate product.

In view of the foregoing, the claims are rendered vague and indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10, 12 and 105 are rejected under 35 U.S.C. 102(b) as being anticipated by Bates et al (WO 97/07203) with Beguin et al (FEMS Microbiol. Rev., 1994) to support inherency.

Bates discloses the use of cellulase and amylase to modify various properties of polysaccharides at various stages of processing. See page 7, beginning at line 5 and continuing

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through page 9, line 5; page 14; and examples at pages 17-54. These polysaccharidase enzymes inherently comprise polysaccharide binding domains covalently attached to a catalytic domain. The catalytic domain can function independently of the binding domain and therefore must be considered a protein in its own right. For cellulase, see Beguin at page 35, 2nd column.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10, 12 and 105 rejected under 35 U.S.C. 103(a) as being unpatentable over Bates et al (WO 97/07203) with Beguin et al (FEMS Microbiol. Rev., 1994) to support inherency, as above.

Bates teaches as set forth above. The reference does not exemplify each material recited in claim 5 at every stage of processing (“before,” “during” or “after”). However, each of these exemplifications is expressly suggested, as cited above.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a multi-domain polysaccharidase, wherein one of the domains is a polysaccharide binding domain to modify the physical properties (as defined by the reference, these would include structural, chemical, electrical and mechanical) at any stage of processing into a polysaccharide-containing material. One of ordinary skill would expect success in such a process because it is expressly suggested in Bates.

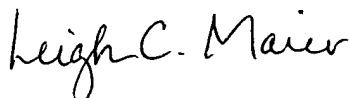
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Examiner's hours, phone & fax numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Maier whose telephone number is (571) 272-0656. The examiner can normally be reached on Tuesday, Thursday, and Friday 7:00 to 3:30 (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Anna Jiang (571) 272-0627, may be contacted. The fax number for Group 1600, Art Unit 1623 is (571) 273-8300.

Visit the U.S. PTO's site on the World Wide Web at <http://www.uspto.gov>. This site contains lots of valuable information including the latest PTO fees, downloadable forms, basic search capabilities and much more. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197. -



Leigh C. Maier
Patent Examiner
January 23, 2006